Toward Just Sustainability in Urban Communities: Building Equity Rights with Sustainable Solutions

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Two concepts that provide new directions for public policy, environmental justice and sustainability, are both highly contested. Each has tremendous potential to effect long-lasting change. Despite the historically different origins of these two concepts and their attendant movements, there exists an area of theoretical compatibility between them. This conceptual overlap is a critical nexus for a broad social movement to create livable, sustainable communities for all people in the future. The goal of this article is to illustrate the nexus in the United States. The authors do this by presenting a range of local or regionally based practical models in five areas of common concern to both environmental justice and sustainability: land use planning, solid waste, toxic chemical use, residential energy use, and transportation. These models address both environmental justice principles while working toward greater sustainability in urbanized areas.

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A great deal has been written in the past few years about environmental justice, sustainability, and the putative compatibility of the

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two concepts.[1] Environmental justice and sustainability concepts are now being translated into public policy statements at the federal level as well as at the level of some states and localities. This article explores the intersection of these concepts while focusing on their practical application within an urban setting. It is the premise of this article that community-based initiatives to address environmental justice and sustainability concepts are the true test case for their theoretical compatibility. After reviewing various individual projects from around the United States, the relevance of these efforts to the broader sustainability and environmental justice movement(s) will be discussed.

Sustainability and Environmental Justice in Theory

Agyeman (2000, 2001, 2002) and Agyeman, Bullard, and Evans (2002, 2003) have described the development of the concepts (and movements) of environmental justice and sustainability. It is not our intention to revisit these issues here. However, we must clarify our definitions. As with sustainability, there are many possible definitions of environmental justice. The Commonwealth of Massachusetts (2002) uses the following definition in its *Environmental Justice Policy*:

> *Environmental justice* is based on the principle that all people have a right to be protected from environmental pollution and to live in and enjoy a clean and healthful environment. Environmental justice is the equal protection and meaningful involvement of all people with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies and the equitable distribution of environmental benefits.

This definition will inform the arguments made throughout this article. It has both procedural ("meaningful involvement of all people") and substantive ("right to live in and enjoy a clean and healthful environment") justice aspects.

The broad acceptance of sustainability as the overarching public policy goal (Agyeman and Evans 1995; Campbell 1996) does not mean that there is any one agreed-on definition of sustainability, although the definitions of the World Commission on Environment and Development (1987) and the International Union for the Conservation of Nature (1991) are most often quoted. Our working definition of *sustainability*, developed by Agyeman, Bullard, and Evans (2002), will be "the need to ensure a better quality of life for all, now and into the future, in a just and equitable manner, whilst living within the limits of supporting ecosystems" (p. 78). Neither the World Commission on Environment and Development (1987) nor the International Union for the Conservation of Nature (1991) definitions specifically mentions justice and equity, which we hold to be of pivotal importance in the move toward sustainable futures.

At a less pivotal but more practical level, there exists a nexus of theoretical compatibility between sustainability and environmental justice, including an emphasis on community-based decision making; on economic policies that account fiscally for social and environmental externalities; on reductions in all forms of pollution;

FIGURE 1
SIMPLE VENN DIAGRAM OF SUSTAINABLE DEVELOPMENT THEORY
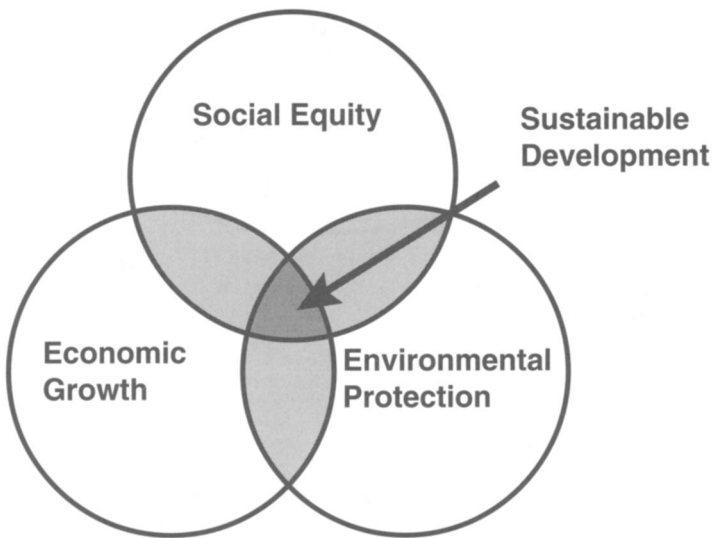
on building clean, livable communities for all people; and on an overall regard for the ecological integrity of the planet. A widely used Venn diagram illustrates the interdependent concepts of environmental protection, social equity, and economic growth (see Figure 1). Many regard this as the overarching visual representation of sustainability (O'Riordan 1999).

Others have looked at the model and the theories of environmental justice and sustainability to anticipate conflict(s) between their interests (Campbell 1996; Ruhl 1999; Dobson 1999, 2003) (see Figure 2). As an academic planner, Campbell (1996) identified these conflicts as "the property conflict" (between planning for economic growth and social justice), "the development conflict" (between planning for social justice and environmental protection), and "the resource conflict" (between planning for economic growth and environmental protection) (see Figure 2). He saw the planner's role as moving toward the center of the triangle, toward sustainable development ("green, profitable and fair").

Clearly, the interpretation of sustainability and environmental justice as a realm for collaboration or a source of conflict depends highly on the typology of sustainability[2] being described, the particular principles of environmental justice (see appendix) being emphasized (or which of Taylor's [2000] "six major thematic components"[3] are being emphasized), and the economic theories one supports. True sustainability with a full regard to environmental justice would be best reached by advancing sustainability ideals toward hard/strong sustainability or ecocentric theories while highlighting environmental justice theories that incorporate intergenerational, intragenerational, international, and interspecies equity,

FIGURE 2
SUSTAINABLE DEVELOPMENT AND ITS CONFLICTS
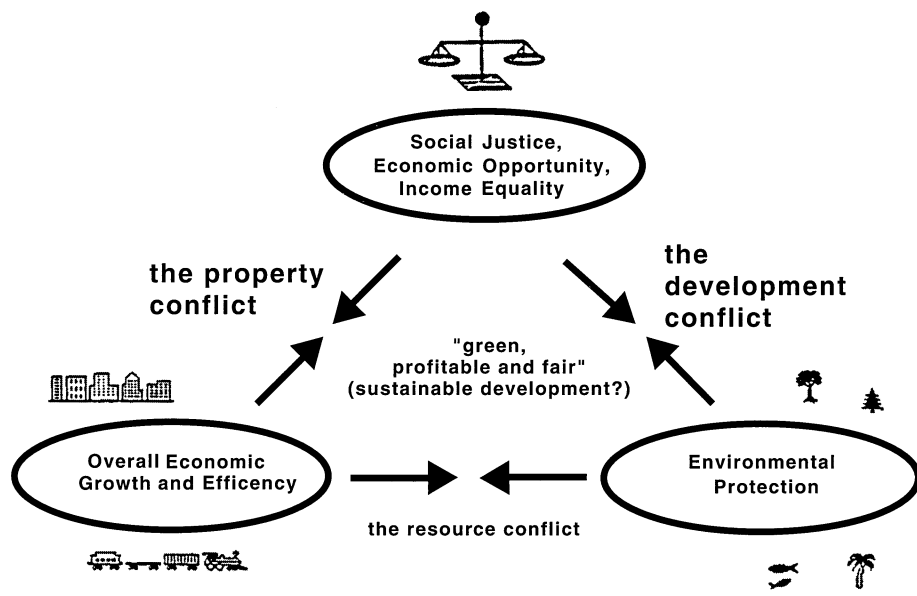
SOURCE: Campbell (1996).

and supporting economic reforms that value community economic development with redistributive values and policies.

Most sustainability and environmental justice advocates have a serious concern for the urban environment (Satterthwaite 1999). As the home for a growing percentage of the world's population, the cultural centers for many minority communities, and the consumer of large portions of the land's natural resources, cities represent a critical proving ground for both movements. Many cities across the United States, such as Seattle, Santa Monica, and Boston, have launched sustainability programs that often revolve around the identification and use of sustainability indicators that help chart progress toward or away from sustainability. Although many of these programs are well intentioned, declaring their definition and goals for sustainability, most fall short of addressing social justice and equity concerns as pivotal (Brugmann 1997; Yanarella 1999). Indeed, Portney (2003), in his study of what makes some cities take sustainability seriously, noted that "if equity issues are important conceptual components of sustainability, then sustainable cities initiatives in the US do not seem to take it very seriously" (p. 175).

Often, the sustainability measurements place a priority on economic sustainability and livability standards above all other factors. Lake (2000) identified Boston and Chattanooga in this category. On the other hand, in a study of sustainability projects in the largest U.S. cities, Warner (2002) found that few cities

even acknowledged environmental justice as an aspect of sustainability. Forty websites were identified that deal with thirty-three cities of the seventy-seven cities with populations exceeding 200,000 in 1990. Of these, only five sites mentioned environmental justice as a substantive concern, and there was significant variation in the way that environmental justice was linked with sustainability in these few cases, from a few words to a full policy linkage with indicators (San Francisco). Similarly, the Environmental Law Institute (1999) analyzed 579 applications to the Environmental Protection Agency's 1996 Sustainable Development Challenge Grant Program. Fewer than 5 percent of applications had "equity" as a goal, and interestingly, fewer than 1 percent addressed "international responsibility."

Like Campbell (1996), we agree that "in the battle of big public ideas, sustainability has won: the task of the coming years is simply to work out the details, and to narrow the gap between its theory and practice" (p. 301). Whereas no one would claim that there is a chance of true sustainability or sustainable development in advanced industrial societies anytime soon, some practical policies for sustainable development that are being implemented to some extent in different parts of the world, including the United States, are the following:

- Ecotaxes, which shift the tax burden from good things like employment to bad things like pollution and excessive resource use.
- Elimination of agricultural and energy subsidies, which are environmentally damaging through their encouragement to overuse energy, fertilizer, pesticides, and irrigation water. Sustainable agriculture relies on the recycling of nutrients, natural pest control, labor intensivity, and reduced artificial usage.
- Local exchange trading schemes enable people to decide the local unit of currency and trade their skills in it. In time money schemes, the currency is the hours spent in volunteer activity, so that shopping for local elderly people becomes an alternative form of money.
- Affordable housing is being financed through community finance initiatives such as community development banks, corporations, and credit unions. Location-efficient mortgages, which reward certain locations (close to transit nodes), are being developed. Cooperatives and cohousing options are becoming increasingly popular.
- Recycling and renewable energy are being given greater prominence in some areas. Industrial ecology is showing how industrial systems can be made to mimic the closed cycle patterns of natural systems with materials reuse and minimal or zero waste.
- Efficient transportation systems, which replace energy-intensive automobile transport with high-speed trains, public transit, and greater use of bikes and walking, are being developed. City and suburban redesign through smart growth and new urbanism projects minimizes transportation needs through mixed-use developments. This creates a focus on access rather than mobility.
- Community-supported agriculture schemes, or community farms in Europe and food guilds in Japan, and farmer's markets are becoming increasingly popular in U.S. cities.

Following Campbell's (1996) point, the question now becomes, Can we achieve sustainable development and sustainable communities, as outlined in Table 1[4], by tweaking existing policies, which we are doing at present, or do we need a rethink: a paradigm shift away from our present market-driven, resource-intensive development paradigm (Milbrath's [1989] "Dominant Social Paradigm") to one in which society and social values come before economics (Milbrath's [1989] "New Envi-

ronmental Paradigm")? The economy (i.e., the market) must become a tool to achieve policy goals as opposed to being the source of such goals. The market should be treated as a social institution, not as an objective entity; value-based political processes define goals, not global markets; economic activity is not an end in itself—it is valued only insofar as it contributes to the politically adopted goals of society (Levett 1997).

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The policy areas above (and those in Table 1) are valuable demonstrations of what we could achieve, and in certain cases and localities, are achieving, but they are still best practices, not ordinary or mainstream practices. And if we need a paradigm shift, will the New Environmental Paradigm alone deliver sustainable development? Taylor (2000) has argued that it is virtually devoid of an appreciation of social justice. Should the New Environmental Paradigm be combined with Taylor's (2000) Environmental Justice Paradigm to form a new, Just Sustainability Paradigm along the lines suggested by Agyeman, Bullard, and Evans (2003)?

Although Levett's (1997) "paradigm shift" (which is essential for true sustainability) may be as elusive as ever, there are numerous practical attempts to address the tensions (Campbell's [1996] "conflicts") between economic development, environmental protection, and social justice with innovative ideas, programs, and strategies that we detail below. These are resulting in more sustainable communities, not fully sustainable communities.

Sustainability and Environmental Justice in Practice

To investigate the applicability of environmental justice within sustainability formulations, or vice versa, a collection of ideas and programs has been assembled that provides proactive, balanced efforts to create sustainable urban development in U.S. cities. The objective of this section is to describe a sample of initiatives that illustrate the nexus of theoretical compatibility between sustainability and environmental justice, in practical programs and projects. The projects and organizations selected target different issues within the urban environment and may have alternative perspectives on the priorities, tensions, and conflicts between sustainability

TABLE 1

THE CHARACTERISTICS OF A SUSTAINABLE SOCIETY OR COMMUNITY

A sustainable community seeks to	
Protect and enhance the environment	Use energy, water, and other natural resources efficiently and with care
	Minimize waste; then reuse or recover it through recycling, composting, or energy recovery; and finally sustainably dispose of what is left
	Limit pollution to levels that do not damage natural systems
	Value and protect the diversity of nature
Meet social needs	Create or enhance places, spaces, and buildings that work well, wear well, and look well
	Make settlements human in scale or form
	Value and protect diversity and local distinctiveness and strengthen local community and cultural identity
	Protect human health and amenity through safe, clean, pleasant environments
	Emphasize health service prevention action as well as cure
	Ensure access to good food, water, housing, and fuel at reasonable cost
	Meet local needs locally wherever possible
	Maximize everyone's access to the skills and knowledge needed to play a full part in society
	Empower all sections of the community to participate in decision making, and consider the social and community impacts of decisions
Promote economic success	Create a vibrant local economy that gives access to satisfying and rewarding work without damaging the local, national, or global environment
	Value unpaid work
	Encourage necessary access to facilities, services, goods, and other people in ways that make less use of the car and minimize impacts on the environment
	Make opportunities for culture, leisure, and recreation readily available to all

SOURCE: Department of Environment, Transport and the Regions (1998).

and environmental justice. The importance, however, is that the ideas of sustainability and environmental justice are being applied in practice.

The avenues of implementation used at the community level are also varied, involving techniques ranging from street activism to private enterprise. Many initiatives are based on partnerships between community nonprofits, national nonprofits, local or federal governments, and/or private industries. This sample shows the involvement of various sectors of society in addressing sustainability and environmental justice principles.

Five "issue" categories of common concern to both environmental justice and sustainability are explored: land use planning, solid waste, toxic chemical use, residential energy use, and transportation. Most of the information about individual

programs was acquired initially over the Internet with some interviews with orga-
nization staff members. Although many of these organizations have been discussed
in articles, either academic or popular press, their websites were the most effective
source of recent information on the activities of community groups, activists, and
nonprofit organizations.

Land use planning

Historically, the primary tool of land use planning, zoning, has led to geographic
segregation of both people and land utility. Land use policy has led to the cumula-
tive effects of environmental hazards' being shouldered within low-income and
minority communities (Bullard 1995). Planners concerned with sustainability
point out flaws in land use planning such as separation of uses and low-density
development, which have encouraged urban sprawl and auto dependent transpor-
tation (Beatley and Manning 1997; Newman and Kenworthy 1999). Recent move-
ments in urban planning, however, have advocated for a change in the historical
land use planning to encourage more efficient land development, mixed-use and
mixed-income developments, and the reuse of former industrial sites (Duany,
Plater-Zyberk, and Speck 2000). In addition, procedural changes in the planning
process encourage greater community outreach and public participation in land
use decisions (Kelly and Becker 2000; American Planning Association 2000). Sus-
tainable and just urban planning will require coordinated metropolitan/regional–
level regional planning in addition to crafting participatory approaches to compre-
hensive planning to prioritize existing community needs. In the meantime, com-
munity organizations are successfully developing tools to bridge the interests of
their residents and the municipal planning process.

Urban ecology. Urban Ecology in Oakland, California, is an organization
founded in 1975 that is engaged in two avenues toward promoting sustainability
and environmental justice principles in land use planning within the San Francisco
Bay Area. Its Community Design Program provides planning and design services
to low-income urban neighborhoods to assist them with community development.
It has developed a process to bring the services of city planners into communities to
engage in local needs assessments and community visioning. Urban Ecology helps
organizations facilitate the drafting of a community plan that addresses the imme-
diate and long-term needs of the area and assists the local community organiza-
tions with implementation strategies. Although the needs of the community are
given first priority, Urban Ecology staff often promote ideas such as transit access,
pedestrian-friendly streetscapes, and affordable infill housing to help revitalize
neighborhoods with sustainability principles in mind (Urban Ecology 1996).
Urban Ecology's Sustainable Cities Program approaches municipal govern-
ments and community groups in cities in the midst of economic and population
growth to promote more sustainable development patterns. The suburbs at the
frontiers of urban sprawl are encouraged to adopt smart growth principles, which
allow for diverse housing options and alternative transportation infrastructure. Urban

Ecology advocates for infill development, affordable housing, transit-oriented development, reduced parking requirements, and mixed-use projects. It provides information to municipalities and citizen groups about private developers who have applied these principles in their projects. Urban Ecology also runs workshops for the public on how to review new projects and advocate for sustainable land development. In the Bay Area, the issues of urban sprawl, environment preservation, and social justice are deeply linked together, and groups such as Urban Ecology are working with many communities in pursuit of a more sustainable and equitable region (see http://www.urbanecology.org).

Solid waste management

Solid waste reduction is one of the keystone issues of the environmental movement. The most widely practiced strategy, recycling, is promoted as a municipal effort to reduce urban ecological footprints. At the same time, waste management

Up to 75 percent of an old structure can be reclaimed rather than demolished, and the materials can be sold at the ReUse Center.

facilities are one of the major issues confronted frequently by environmental justice groups. To communities overburdened with waste management facilities, new projects involving trash, whether they are transfer stations or recycling facilities, are usually not a welcomed land use. Sustainability advocates must use caution when proposing recycling industry facilities as community economic development opportunities for low-income areas. Waste can be an asset in local economic development, contributing to work opportunities, whereas some wastes, primarily toxic wastes, can be an assault on such communities (Ackerman and Mirza 2001). The goal of reducing waste generation and increasing recycling must be planned so the environmental and economic benefits are shared.

The Green Institute. The Phillips community is one of the most diverse neighborhoods in Minneapolis and has a long history of community activism. In the 1980s, the residents of Phillips organized a campaign to resist the construction of a garbage transfer station in their community. The city cleared twenty-eight homes for the ten-acre site, but the construction of the project was eventually halted by residents of the Phillips neighborhood. The People of Phillips neighborhood group then created the Green Institute (see http://www.greeninstitute.org) to create sus-

tainable business enterprises on the now-vacant site in Phillips. The Green Institute is an entrepreneurial environmental organization creating jobs, improving the quality of life, and enhancing the urban environment in inner-city Minneapolis and now operates three revenue-generating ventures designed to combine green industry with local economic development. In 1995, the ReUse Center was developed to sell scavenged building and construction materials. The retail store reclaims materials from the local waste stream and sells them at low cost. The center offers living wages for employees and offers community classes on home improvement. In 1997, the Green Institute began its DeConstruction service to remove salvage materials from building or demolition sites. Through DeConstruction, up to 75 percent of an old structure can be reclaimed rather than demolished, and the materials can be sold at the ReUse Center. Most recently, the Phillips Eco-Enterprise Center, an award-winning business center built with green building technologies, was completed in 1999 on the site originally intended for the garbage transfer station. The Green Institute and their Phillips Eco-Enterprise Center are working to attract other environmentally conscious organizations and companies to continue their pursuit of sustainable economic development within the Phillips community (see http://www.greeninstitute.org).

Toxic chemical use

Four ideas have broadened the tools available to communities addressing the environmental justice and sustainability aspects of industrial operations. One is the "right to know" concept that requires full disclosure of chemical hazards to the community under the Emergency Planning and Community Right to Know Act (1986). This type of legislation is valuable as a small-scale industrial operation using hazardous materials has the opportunity to create large-scale public health and long-term ecological risks. The second tool is "toxic use reduction," aimed at redesigning industrial processes to use less hazardous substances and release less pollution into the air and water (Geiser 2001). Toxic use reduction allows for new production methods and application of new technology rather than requiring plant closures. This functions as a tool against the so-called jobs blackmail argument that industrial jobs in low-income communities will be sacrificed for environmental concerns. The third is the "precautionary principle,"[5] which argues that "where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation" (Bergen Ministerial Declaration, cited in Raffensperger and Tickner 1999, 106). The sustainability and environmental justice movements would benefit from the creation of market demands that favor products generating fewer toxins and less solid waste at the end of the line, and from a regulatory system that enshrines the precautionary principle and promotes toxic use reduction. The fourth is "clean production," about which *Rachel's Environment and Health News* (Clean production 1999) says, "unlike 'pollution prevention' and 'recycling,' clean production asks fundamental questions about consumption: is a particular product even needed in the first place? And is it being produced in a way that promotes the

goals of the community?" (p. 1). The first two tools are now well used in environmental justice and sustainability, but the other two, the precautionary principle and clean production, are still relatively new.

Toxic Use Reduction Institute (TURI). Based in Lowell, Massachusetts, home of the United States's first manufacturing corporation, TURI is a university and state office collaborative organization designed to decrease the quantity of toxic materials used and created by the state's industries. Based within the University of Massachusetts, Lowell's School of Engineering, TURI researchers consult with companies and community groups working to reduce toxic use. The goal is to help industries continue production and contribute to local economic health while cleaning up the environment in a state with a long history of polluting industrial practices. In addition, TURI funds and facilitates multiple public education programs regarding toxic chemical use.

One example of this was a two-day training workshop on clean production co-organized by the Lowell Center for Sustainable Production (a project of TURI), the Deep South Center for Environmental Justice at Xavier University, and the Clean Production Network. Here, theoretical linkages and practical coactivism were explored, led by trainers from both the environmental justice and the sustainability/clean-production fields. Sessions included tools for clean production, life-cycle assessment, design for environment, sustainable product design, policies and resources for clean production, extended producer responsibility, ecological taxes, product life-cycle labeling, applying clean production in campaigns, brownfield redevelopment, and developing a vision for clean production.

The institute was created to help the state's industries comply with the state's innovative Toxic Use Reduction Act passed in 1989. The institute functions as the state's clearinghouse of resources on toxic use reduction. TURI conducts research on toxic use reduction technology, trains certified toxic use reduction planners, and distributes grant funding to cities, towns, and community or environmental organizations. The grants are part of the Toxic Use Reduction Networking program that aims to develop model projects in Massachusetts's communities. Some examples of the programs include healthier cosmetology practices, safer food production in school cafeteria serves, integrated pest management programs, and household hazardous products education (see http://www.turi.org).

Residential energy use

Energy conservation in general is a win-win opportunity within the sustainability and environmental justice agendas. Cutting energy costs can provide economic assistance to low-income residents, particularly in northern regions. A reduction in demand for energy resources has a long-distance benefit to communities affected by their proximity to mining operations, power plants, and hazardous waste disposal facilities. However, the investment necessary to increase the environmental efficiency of existing homes and reduce the ecological impact of new home construction is often seen as incompatible with affordability goals. Cities

often rely on the filtering principle to generate affordable house stock. Older, less energy-efficient homes become occupied by lower-income residents, while wealthier households purchase new houses. Older rented housing units create a particularly difficult area in energy-efficiency policy as the benefactor of home infrastructure improvements is not always the owner. Even as new green building technology improves household energy efficiency, the challenge to broad energy use reduction will be creating the economic opportunity for technology investment and retrofitting of old infrastructure.

National Center for Appropriate Technology (NCAT). NCAT (see http:// www.ncat.org), established as a nonprofit corporation in 1976, works to find solutions to environmental or economic challenges that use local resources and assist society's most disadvantaged citizens. It has developed multiple programs to address energy use for low-income communities. With the assistance of the Department of Housing and Urban Development, NCAT created the Resource Efficient Multi-Family Housing Project to provide technical and financial strategies to owners and operators of apartment buildings. The goals of the project are to decrease utility costs, improve resident health, and conserve energy and water. Working with housing authorities, the project targets multifamily buildings in developing a comprehensive plan for energy and water use reduction.

NCAT also operates the Low-Income Home Energy Assistance Program as an information clearinghouse on residential energy conservation for those with the greatest energy cost burden and/or highest need. The program targets community groups, housing officials, energy providers, and low-income residents, providing information on conservation, energy self-sufficiency, and cooperative utility programs. The Low-Income Home Energy Assistance Program administers grants to help implement the goals of reducing the energy burden of households. Another similar NCAT project is the Affordable Sustainability Technical Assistance Program that works with Department of Housing and Urban Development grant programs. The goal is to incorporate green building designs into affordable housing projects. NCAT's other energy projects include statewide solar initiatives, low-income solar home demonstrations, and multiple energy-efficiency consulting plans with state and local housing authorities (http://www.ncat.org).

Transportation planning

Transportation justice has addressed a wide range of issues during the past century, including bus and rail segregation, highway development, transit design, toxic freight, airport expansion, and neighborhood street safety (Conservation Law Foundation 1998). Historically, large-scale highway projects have had a significant impact on minority and low-income neighborhoods while facilitating increased automobile use and emissions by wealthier suburban residents. Activists are continuing to work to gain equity within transportation systems, particularly urban transit. In many cities, the differentiation of transit quality between services for

suburban commuters and those for urban residents is analogous to the segregation fought in the bus boycotts of the 1950s and the Freedom Riders campaign in the 1960s (Bullard and Johnson 1997). Many urban sustainability advocates point to transportation as the number-one issue to address in creating sustainable cities, and gradually, federal, state, and local transportation agencies have included nonautomotive modes as relevant parts of transportation systems (Newman and Kenworthy 1999).

Spanish Speaking Unity Council–Fruitvale Transit Village. In the 1960s, a state agency was created to develop a unifying transit system in the San Francisco region, called Bay Area Rapid Transit (BART). As a transit system, BART has had mixed results and has come under a great deal of criticism for its high cost and focus on serving suburban commuter transit. An element of this commuter system design is that most BART stations include large-surface parking lots.

If enough examples of sustainability and environmental justice initiatives can be created and networked, then perhaps this can galvanize a movement to reinvent the definition of progress.

When plans were announced for an expanded parking facility at the Fruitvale station in Oakland to serve driving commuters from outside the predominantly Latino neighborhood, the Fruitvale community responded with frustration. The Spanish Speaking Unity Council (see http://www.unitycouncil.org), a community development corporation for the Fruitvale neighborhood, developed an alternative plan for transit-oriented development around the BART station. Through multiple community meetings and design charrettes with assistance from the University of California at Berkeley, the community created a plan for a transit village at the location of the parking facility. Through rounds of negotiation, the Unity Council was able to convince BART and the city of Oakland to endorse their transit village plan, designed around pedestrian access to BART, retail development, and transit-oriented housing.

The mixed-use development uses ten acres of BART-owned surface parking and an additional fifteen surrounding acres. The master plan includes affordable housing, a senior center, a community health center, day care facilities, street-level

retail shops, and a hidden parking garage. The design incorporates streetscape elements and architecture that reflect the Latino heritage of the community. The Transit Village is the core of a neighborhood revitalization plan that also includes homeowners' programs and local business improvement workshops to help existing residents benefit from new development. The community-based plan for a neighborhood center next to a transit station is an example of how innovations in transportation and land use planning can meet the goals of community development and urban sustainability (see http://www.unitycouncil.org; Shutkin 2000).

Conclusions: From Policy to Practice

The projects in this article represent a small sample of the practical initiatives in the United States, which illustrate the nexus of theoretical compatibility between sustainability and environmental justice. In this emerging field, some tentative conclusions can be made. In the area of land use planning, the essential theme appears to be the empowerment of community members into decision making with local governments and developers. This approximates to procedural justice. This (relatively) successful pattern has not always been followed within urban transportation offices; thus, a more direct and activist approach to transportation equity has been called for in some cities such as Los Angeles and Boston. For toxic and solid waste reduction, collaboration with industries and regulatory bodies as well as enterprising activities by organizations such as NCAT and TURI have led to the application of innovative ideas. The challenge of residential sustainable energy remains creating the link between consumers and available technology in conservation and renewables.

The existence of these examples is not an endorsement of the current economic or social paradigm, a soft/weak sustainability or technocentric model, or a growth-dependent plan for equity. In fact, the requirements of nonprofit or government intervention to create business partnerships, the need for community activism to gain participation in governmental planning, or the reliance on subsidized services for many of these programs highlights the failures of the current system. Some may argue that such programs have proven to be economically unsustainable due to this dependence on grants or other pilot project funding. These limitations can also be seen as a reflection on the challenges ahead for the environmental justice and sustainability movements and, more especially, for those who want to see greater practical linkages between the two. Until government policies and subsidies encouraging unsustainable activities are removed, and negative environmental and social externalities can be accurately accounted for in fiscal terms, our market economy is going to require that these alternative programs gain out-of-the-loop support. These programs are attempting to address social and ecological concerns within an unsustainable and unjust economic system.

While this research focused on five issue areas—land use planning, transportation, residential energy use, solid waste, and toxic use reduction—there exists a range of other areas to be explored for emerging sustainability and environmental

justice models. Issue areas worth additional research might include water pollu-
tion affecting drinking water, fishing areas, and waterways; open space, habitat
preservation, and recreation facilities in urban areas; brownfield cleanup and rede-
velopment in formerly industrial areas; and sustainable agriculture, small-scale
farming, and community food security.

Just as no community in the United States (or the world) meets all the character-
istics of a sustainable community as defined by the British Department of Environ-
ment, Transport and the Regions (1998) highlighted in Table 1, the initiatives
described in this article represent only a small step toward sustainability, or meet-
ing those criteria. However, each program has had a significant impact within its
community. More important, the programs show that people can come together to
apply relevant ideas toward improving conditions within the community. This has
not gone unnoticed in public policy circles. The Environmental Protection Agency,
as well as national environmental groups, is relearning the power of community-
level activism, or civic environmentalism. This is the idea that

> members of a particular geographic and political community should engage in planning
> and organizing activities to ensure a future that is environmentally healthy and economi-
> cally and socially vibrant at the local and regional levels. It is based on the notion that envi-
> ronmental quality and economic and social health are mutually constitutive. (Shutkin
> 2000, 14)[6]

Both the environmental justice movement and sustainability organizers are
increasingly making this perspective a priority, leading to what Schlosberg (1999)
called "cooperative endeavors," such as that between the Lowell Center for Sus-
tainable Production (a project of TURI), the Deep South Center for Environmen-
tal Justice at Xavier University, and the Clean Production Network. To borrow a
metaphor from the antinuclear campaign, the challenge is to convert the one-
hundredth monkey so that a small group applying good ideas sparks society's col-
lective awareness (Keyes 1984). If enough examples of sustainability and environ-
mental justice initiatives can be created and networked, then perhaps this can gal-
vanize a movement to reinvent the definition of progress.

Appendix
Principles of Environmental Justice

1. Environmental justice affirms the sacredness of Mother Earth, ecological unity
   and the interdependence of all species, and the right to be free from ecological
   destruction.
2. Environmental justice demands that public policy be based on mutual respect and
   justice for all peoples, free from any form of discrimination or bias.
3. Environmental justice mandates the right to ethical, balanced, and responsible
   uses of land and renewable resources in the interest of a sustainable planet for
   humans and other living things.

4. Environmental justice calls for universal protection from nuclear testing and the extraction, production, and disposal of toxic/hazardous wastes and poisons, which threaten the fundamental right to clean air, land, water, and food.

5. Environmental justice affirms the fundamental right to political, economic, cultural, and environmental self-determination of all peoples.

6. Environmental justice demands the cessation of the production of all toxins, hazardous wastes, and radioactive materials and demands that all past and current producers be held strictly accountable to the people for detoxification and the containment at the point of production.

7. Environmental justice demands the right to participate as equal partners at every level of decision making including needs assessment, planning, implementation, enforcement, and evaluation.

8. Environmental justice affirms the right of all workers to a safe and healthy work environment, without being forced to choose between an unsafe livelihood and unemployment. It also affirms the right of those who work at home to be free from environmental hazards.

9. Environmental justice protects the right of victims of environmental injustice to receive full compensation and reparations for damages as well as quality health care.

10. Environmental justice considers governmental acts of environmental injustice a violation of international law, the Universal Declaration on Human Rights, and the United Nations Convention on Genocide.

11. Environmental justice must recognize a special legal and natural relationship of native peoples to the U.S. government through treaties, agreements, compacts, and covenants affirming sovereignty and self-determination.

12. Environmental justice affirms the need for urban and rural ecological policies to clean up and rebuild our cities and rural areas in balance with nature, honoring the cultural integrity of all our communities, and providing fair access for all to the full range of resources.

13. Environmental justice calls for the strict enforcement of principles of informed consent and a halt to the testing of experimental reproductive and medical procedures and vaccinations on people of color.

14. Environmental justice opposes the destructive operations of multinational corporations.

15. Environmental justice opposes military occupation; repression; and exploitation of lands, peoples, cultures, and other life forms.

16. Environmental justice calls for the education of present and future generations, which emphasizes social and environmental issues, based on our experience and an appreciation of our diverse cultural perspectives.

17. Environmental justice requires that we, as individuals, make personal and consumer choices to consume as little of Mother Earth's resources and to produce as little waste as possible and make the conscious decision to challenge and reprioritize our lifestyles to ensure the health of the natural world for present and future generations.

Notes

1. Some authors such as Dobson (1999, 2003) take a separatist and traditional environmentalist view. They argue that the concepts of, and movements for, sustainability and environmental justice will come into conflict because of the environmental justice movement's primary focus on the issue of social equity, whereas the focus of environmental sustainability (as he calls it) is on green issues.

2. A descriptive typology within the sustainability discourse is that of "strong/hard" sustainability versus "weak/soft" sustainability (Jacobs 1992). Hard or strong sustainability, which equates with ecocentrism, implies that renewable resources must not be used faster than they can regenerate, that is, that (critical) natural capital must not be spent—we must live off the income produced by the capital. Soft or weak sustainability, which equates with technocentrism, accepts that certain resources may be depleted as long as others can substitute for them over time. Natural capital can be used up as long as it is converted into manufactured capital of equal value. One problem with weak sustainability is the difficulty in assigning monetary value to natural materials and services. In addition, it does not take into account the fact that manufactured goods and services cannot replace all resources. Strong sustainability thus maintains that there are certain ecological functions or services the environment provides that cannot be replaced by technological fixes.

3. Taylor (2000) argued that the Principles of Environmental Justice "show a well developed ideological framework that explicitly links ecological concerns with labor and social justice concerns" (p. 538). She continued, "The Principles contain six major thematic components that deal with (a) ecological principles; (b) justice and environmental rights; (c) autonomy/self determination; (d) corporate-community relations; (e) policy, politics and economic processes; (f) social movement building" (p. 539). She further argued that "environmental justice is grounded in ecocentric principles akin to those espoused by Muir" (p. 539). In addition, she argued that the environmental justice paradigm "is the first paradigm to link environment and race, class, gender, and social justice concerns in an explicit framework" (p. 42).

4. Table 1, developed by the then–Local Government Management Board in Great Britain in 1994, presents the characteristics of an ideal sustainable community that espouses these environmental, social, and economic goals. These characteristics and goals are remarkably similar to those Elements of a Sustainable Community, which were developed by the Board of the Institute for Sustainable Communities in Vermont and subsequently utilized by the President's Council on Sustainable Development (1997) in its task force report *Sustainable Communities*.

5. The Board of Supervisors of the city of San Francisco voted eight to two to adopt the precautionary principle as city policy in June 2003.

6. See Agyeman and Angus (2003) for a broader discussion of civic environmentalism.

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